

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information, and not for publication. References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and though we endeavor to reply to all, either by letter or in this department, each must take his turn. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(2558) W. H. asks where to get a book on steam yacht hull building, both in wood and sheet metal. A. We can supply you with "Steam Yachts and Launches, Their Machinery and Management," by Kunhardt. Price \$3. 2. Are iron hulls better than wood for fresh water? A. No. 3. Is steam cheaper than electricity for propelling a boat? A. Yes. 4. Which is the best propeller for speed—a three or four blade? A. Probably a three-blade propeller is better. 5. Is a five horse power engine too heavy for a 23 by 5 foot boat? If so, what is the proper size engine to drive said boat 12 to 14 miles per hour? A. A two horse power engine should be big enough. You cannot get such high speed. 6. What is the fastest time ever made in the United States by a 25 foot steam yacht? A. There is no reliable record. Anything over 10 miles an hour would be very fast.

(2559) M. A. T. asks (1) how to transfer photographs to glass and whether oil or water colors should be used. A. See full directions in SCIENTIFIC AMERICAN SUPPLEMENT, No. 657. 2. Will sas-afra used freely as a tea for a flesh reducer harm one in good health? A. Not unless used in excess. 3. What organ would it be likely to affect the most? A. Possibly the brain.

(2560) I. E. asks: Is there any composition which can be either melted by a gentle heat or by immersion in alcohol or turpentine sufficiently to allow of its being run into a mould and allowed to cool or evaporate, thus becoming solidified again, thereby answering the purpose desired? A. What is called pure gum rubber, which is lightly vulcanized, can be pressed hot into talc-coated moulds, and by a longer heating will, to a considerable extent, retain the shape. Otherwise for a temporary purpose printer's roll composition (see query 2427) might answer.

(2561) T. B. C. asks: Can you give in your correspondent's column a receipt for cleaning paint off inside woodwork other than sandpapering? A. Burning is often used, the paint being scraped off as it melts under the flame of a blast lamp. Try washing with caustic soda or potash dissolved in water and thickened, if necessary, with lime or whiting.

(2562) A. Constant Reader asks: Please tell me the composition of celluloid. A. It is in general terms an intimate mixture of nitrocellulose and camphor. It is described in answer to query 996. 2. Is that composition worked under patent? A. Yes. 3. How to unite it. A. A special cement is sold for the purpose. Possibly heat and pressure might answer your purpose.

(2563) E. G. H. asks: 1. What causes sal-ammoniac batteries to polarize? A. The depolarizer (binoxide of manganese) is a solid, and works very slowly. 2. Does in reality the positive brush of a dynamo have more to do than the negative? A. No. 3. Will a dynamo generate current in a vacuum? A. Yes; air has nothing to do with its action. 4. Can a chemist distinguish human blood from animal blood? A. Not with certainty.

(2564) J. B. W. asks for a receipt for making chamois skin (or leather) a conductor of electricity. A. Moisten with salt water, or thoroughly impregnate with fine graphite well rubbed in.

(2565) K. W. asks: What is the composition of smokeless gunpowder? A. A number of such have been invented. Sometimes the substitution of ammonium nitrate for potassium nitrate is the basis.

(2566) L. A. W. asks: What is the composition of a magnesium flash light powder without chlorate of potash? A. Magnesium 40 per cent. Permanganate of potassium 20 " Peroxide of barium 40 "

(2567) A. A. asks: 1. Has the soft iron wire of the armature core of motor to be of one length? A. It is immaterial whether the soft iron wire of the armature is of a single piece or a number of pieces. 2. I-shellac varnish gum shellac dissolved in alcohol? A. Yes.

(2568) M. P. asks: What decision was taken at the meeting appointed by N. Y. Postmaster-General, in Washington, D. C., on October 1, about the letter box wanted for dwellings? A. No decision as yet. 2. What metal and what material are non-conductors of heat? A. No metal; quicklime and zirconia are among the best. 3. I have a device for ruled blue paper, very simple; how can I proceed to have some profit of it? A. Patent and advertise; we should not look for a large profit.

(2569) J. A. C. writes: 1. I am using water in my house from a boiling spring (cold), and it coats the tea kettle with a deposit of lime or something of that nature, and it is now almost half an inch thick, and I find it difficult to remove. How can I remove it and how keep it from gathering again if possible? A. You can purify it by adding to it some lime water. Determine by experiment how much is needed. This addition will produce a white precipitate and will carry down all the lime. The water must then be allowed to

settle and clear. Do it a barrelful at a time. Once you determine the right amount to use per barrel, the principal work is done. 2. Do you consider such water unhealthy for one to drink? A. It is disputed. We incline to the belief that it is not necessarily injurious.

TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

October 28, 1890.

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Table listing inventions and their patent numbers, including items like Adding machine, Advertising device, Air brake, and various mechanical devices.

Table listing inventions and their patent numbers, including items like Coupling, Crane, Credit slip, and various electrical and mechanical devices.

Table listing inventions and their patent numbers, including items like Manger, Match safe, Measure indicator, and various agricultural and industrial machines.